# PAARAgraphs

**Since 1937** 

Monthly Newsletter for the Palo Alto Amateur Radio Association, Inc.



### Calendar

September 8, 1995 PAARA Meeting Menlo Park Recreation Center 700 Alma Street, Menlo Park 7:30-9:30 PM

Sept. 20, 1995 PAARA Board Meeting Red Cross Bld. 400 Mitchell Ln., Palo Alto, 7:30 P.M.

October 6, 1995 PAARA Meeting
October 7, 1995 PAARA Auction
October 18, 1995 PAARA Board Meeting
October 20, 21, & 23 1995 Pacificon '95
Concord, CA contact-Richard Schulze, AA6DL
(510) 932-6125 (hotline)

November 3, 1995 PAARA Meeting, 7:30 Nov. 15, 1995 PAARA Board Meeting December 1, 1995 PAARA Meeting, 7:30 December No PAARA Board Meeting December 6, 1995 PAARA Holiday Banquet January 5, 1995 PAARA Meeting, 7:30



Program

October 6, 1995

Speaker: Bill Rausch, AA6PA "3rd Satellite Program"



### DX

Dx, ie: foreign countries, still remain available during the day on 20 meters, fone and CW. 10 meters has been open, but as far as I know, only to **South America**. The bands are not dead,

contrary to the befief that now is the bottom of the 11 year cycle. Good phone contacts are numerous, as are CW. 40 is also open during the nights and early morning. Today for example, 3W5FM in Vietnam is on 7005, 4F2IR on7007, BV7FF on 7008, and 2 South African stations on 14 Mhz.

Japan is very easy to contact on 40 in the early morning hours or around 4 PM our time. Working Japan on fone is a little tricky, as you must work split frequencies. The modern transceivers do have this capability. Working on split frequencies is also necessary in order to contact the DXpeditions. Usually going up in frequency 5 to 10 Khz is the norm. October starts the DX contests, fone & CW. It is easy to work many new countries during the contests, and once you try a contest you will find it a lot of fun and a real challenge.

Ron, W6VG

PARRA RUOTION

Will Be

October 7

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### **Miscellaneous Dates**

Flea Market at Foothill (6AM - 2PM)
September 9...... American Red Cross (PA Chapter)

PAARA Palo Alto Amateur Radio Association meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30, contact Jerry Tucker WA6LNV 415-961-3266.

EMARC Electronics Museum Amateur Radio Club Maets 4th Friday 7:30 each month, contact Sheldon Edelman 415-858-2176.

NCDXC Northern California DX Club
Meets 2nd Friday cach month, repeater for member info 147.360
each Thursday 8:00PM, contact John Troster W6ISQ 415-854-3939.

NorCalQRP Northern California QRP Club Meets 1st Sunday each month, contact Jim Cates 3241 Eastwood Rd., Sacramento, CA 95821.

Perham Foundation, contact Sy Stein WA6ROM 468-734-4453

SCARES South County Amateur Radio Emergency Service Meets 3rd Thursday 7:30 each month, San Carlos City Hall. Net is on 144.45 & 444.50 (PL-100) 7:30 Monday evenings. contact Dick Collins K6ANN 415-593-8952

SPECS Southern Peninsula Emergency Communication System Meets each Monday 8:00PM on Net 145.27, 224.36, 440.80 Mhz+ contact Mike Hastings KB6LCJ, 408-243-6745 or 408-249-6909.

Disaster Services, Palo Alto Chapter, American Red Cross Meets 3rd Wed. each month 7:30PM, HF, packet, BBS, ATV, OSCAR Gateway, NASA satellite, contact Ruth Claypool 415-688-0423.

VE Exams Ampex Cafeteria, 3rd Saturday each month, 11AM

\*\*HAMCON \*95\*\* ARRL SOUTHWESTERN DIVISION Convention, September 1-3, Long Beach, CA, contact Nate Brightman (310) 427-5123

JOTA Jamboree On The Air, World wide Amatuer Radio and Scouting event, 3rd weekend of October (Oct 21).

### TREASURER REPORT

Dave Bailey, WS6W

Revenues	APR	MAY	JUN	JUL	TOTAL
	95	95	95	95	1995
Dues	354	72.00	18.00	42.00	666.00
Flee Market	0	100.00	0	129.38	1931.38
AMPEX Auction	0	0	0	0	0
Advertisements				650.00	650.00
Total	354	172.00	18.00	821.38	3247.38
Expenditures					
Stamps/Envelopes	0	0	64.00	0	96.00
DMV	0	0	0	0	43.00
State of CA	0	0	0	0	5.00
City of Menlo Park	0	0		0	150
Speaker's Dinner	12.00	13.00	0	7.03	42.03
Flea Market	379.47	0	0	0	1168.69
AMPEX Auction	0	0	0	0	0
Meeting Refresh	13.79			0	44.59
PAARAgraphs	179.78	16.99	64.63	324.53	793.40
Picnic	0	0	398.15	0	
Field Day			416.41	416.41	
Misc.	0	19.97	0	14.00	119.03
Total	585.04	49.96	943.19	761.97	2461.80

Checking

\$ 4,626.57

Savings

\$ 17,489.42

### PAARAgraphs Ad Rates

PAARAgraphs accepts paid advertisements from non-members (short personal advertisements from non-members (short personal advertisements).

All ad rates listed are per issue only.

 Not for profit ade by association members for ham-related stems and wants. No cost for business card size ads (additional space at \$2.50 per business card size).

 For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50full page or back cover

These fees may be reduced or waived in exchange for a valuable consideration that is given to the Association or its general membership. Such consideration must be in addition

to any existing arrangements with the association.

The PAARAgraphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association. All fees are for "scanner-ready" copy or text-only ads.

## Amateur tower meets utility power; ham killed!

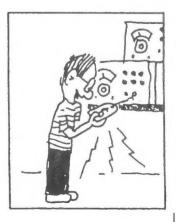
Another Radio Amateur has died while erecting an antenna near a power line. The Dallas Morning News reported that on March 18, Emest Rutledge, KCSCQR, of Keller, Texas, was electrocuted while

Another Radio Amateur has died while recting an antenna near a power line. The take chances, Safety first!

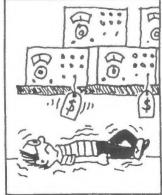
from the May '95 Foundation for Amateur Radio "Auto-Call"—John Queen, KAØSEY, Editor

### ELMER





## By Rich Regent, K9GDF





### BAND GUIDE from July Dxer, courtesy Hal Godfrey, N6AN, Dxer editor and PAARA member.

BAND GUIDE from July Dxer, courtesy Hal	Godfrey, N6AN, Dxer editor and PAARA member.
This is a high frequency band guide detailing the	11175 - 11400 AIR Aeronautical Mobile Transoceanic Flights 11400 - 11650 FDXED Fixed Service
various services throughout the HF band. Listed	11650 - 12050 SWBC Shortwave Broadcast 25 Meters
	12050 - 12330 FIXED Fixed Service
are such things as the SW broadcast, Amateur,	12330 - 13200 MARINE Maritime Mobile Ship / Shore
Marine, Aircraft, Fixed, Mobile and CB services.	13200 - 13360 AIR Aeronautical Mobile Transoceanic Flights
SHORTWAVE FREQUENCIES BAND GUIDE	13360 - 13600 FIXED Fixed Service
535 - 1705 LOCAL AM Broadcast Standard North America AM	13600 - 13800 SWBC Shortwave Broadcast New WARC Allocation
1705 - 1800 FIXED Fixed Service Land/Mobile/Marine	13800 - 14000 FIXED Fixed Service 14000 - 14350 HAM Amateur 20 Meters
1800 - 2000 HAM Amateur 160 Meters	14000 - 14350 CW Amateur 20 Meters Extra
2000 - 2107 MARINE Maritime Mobile	14025 - 14150 CW Amateur 20 Meters Advanced, General
2107 - 2170 FIXED Fixed Service Land/Mobile/Marine	14150 - 14350 PHONE Amateur 20 Meters Extra
2170 - 2194 MOBILE Land Mobile Service	14175 - 14350 PHONE Amateur 20 Meters Advanced
2194 - 2300 FIXED Fixed Service	14225 - 14350 PHONE Amateur 20 Meters General
2300 - 2495 SWBC Shortwave Broadcast 120 Meters	14350 - 14995 FIXED Fixed Service
2495 - 2505 TIME Time Standard	15000 - 15000 TIME Time Standard WWV
2505 - 2850 FIXED Fixed Service Land/Mobile/Marine	15010 - 15100 AIR Aeronautical Mobile Transoceanic Flights
2850 - 3155 AIR Aeronautical Mobile Transoceanic Flights 3155 - 3200 FIXED Fixed Service	15100 - 15600 SWBC Shortwave Broadcast 19 Meters
3200 - 3400 SWBC Shortwave Broadcast 90 Meters	15600 - 16460 FIXED Fixed Service
3400 - 3500 AIR Aeronautical Mobile Transoceanic Flights	16460 - 17360 MARINE Maritime Mobile Ship / Shore
3500 - 4000 HAM Amateur 80/75 Meters	17360 - 17550 FIXED Fixed Service 17550 - 17900 SWBC Shortwave Broadcast 16 Meters
3500 - 3750 CW Amateur 80 Meter CW Extra	17900 - 18030 AIR Aeronautical Mobile Transoceanic Flights
3525 - 3750 CW Amateur 80 Meter CW Advanced, General	18030 - 18780 FIXED Fixed Service
3700 - 3750 CW Amateur 80 Meter CW Novice, Technician	18780 - 18900 MARINE Maritime Mobile Ship / Shore
3750 - 4000 PHONE Amateur 75 Meter PHONE Extra	18900 - 19680 FIXED Fixed Service
3775 - 4000 PHONE Amateur 75 Meter PHONE Advanced	19680 - 19800 MARINE Maritime Mobile Ship / Shore
3850 - 4000 PHONE Amateur 75 Meter PHONE General	19800 - 21000 FIXED Fixed Service
3900 - 4000 SWBC Shortwave Broadcast 75 Meters, Not in Region 2	21000 - 21450 HAM Amateur 15 Meters
4000 - 4000 TIME Time Standard New WARC Allocation Region 3	21000 - 21200 CW Amateur 15 Meters Extra
4000 - 4063 FIXED Fixed Service 4063 - 4438 MARINE Maritime Mobile Ship / Shore	21025 - 21200 CW Amateur 15 Meters Advanced, General
4438 - 4650 FIXED Fixed Service	21100 - 21200 CW Amateur 15 Meters Novice, Technician 21200 - 21450 PHONE Amateur 15 Meters Extra
4650 - 4750 AIR Aeronautical Mobile Transoceanic Flights	21225 - 21450 PHONE Amateur 15 Meters Advanced
4750 - 5060 SWBC Shortwave Broadcast 60 Meters	21300 - 21450 PHONE Amateur 15 Meters General
5000 - 5000 TIME Time Standard WWV	21450 - 21850 SWBC Shortwave Broadcast 13 Meters
5005 - 5450 FIXED Fixed Service	21850 - 22000 AIR Aeronautical Mobile
5450 - 5730 AIR Aeronautical Mobile Transoceanic Flights	22000 - 22720 MARINE Maritime Mobile Ship / Shore
5730 - 5950 FIXED Fixed Service	22720 - 23200 FIXED Fixed Service
5950 - 6200 SWBC Shortwave Broadcast 49 Meters	23200 - 23350 AIR Aeronautical Mobile
6200 - 6525 MARINE Maritime Mobile Ship / Shore	23350 - 24990 FIXED Fixed Service
6525 - 6765 AIR Aeronautical Mobile Transoceanic Flights 6765 - 7000 FIXED Fixed Service	24890 - 24990 HAM Amateur 12 Meters Shared with above Fixed Sve.
7000 - 7300 HAM Amateur 40 Meters	24890 - 24930 CW Amateur 12 Meter Extra, Advanced, General
7000 - 7150 CW Amateur 40 Meter CW Extra	24930 - 24990 PHONE Anateur 12 Meter Extra, Advanced, General 25000 - 25000 TIME Time Standard
7025 - 7150 CW Amateur 40 Meter CW Advanced, General	25010 - 25330 INDUST Petroleum Industry
7100 - 7150 CW Amateur 40 Meter CW Novice, Technician	25330 - 25600 GOVERN Government Freq.
7150 - 7300 PHONE Amateur 40 Meter PHONE Extra, Advanced	25600 - 26100 SWBC Shortwave Broadcast 11 Meters
7225 - 7300 PHONE Amateur 40 Meter PHONE General	26100 - 26480 MOBILE Land Mobile Service
7100 - 7300 SWBC Shortwave Broadcast 41 Meters, Not in Region 2	26480 - 26950 GOVERN Government
7300 - 8195 FIXED Fixed Service	26950 - 26960 FIXED International Fixed Sve
7335 - 7335 TIME Time Standard CHU Canada 8000 - 8000 TIME Time Standard New WARC Allocation Region 3	26960 - 27410 CB Citizen's Band Channels start at 26965 by 10
8000 - 8000 TIME Time Standard New WARC Allocation Region 3 8195 - 8815 MARINE Maritime Mobile Ship / Shore	27410 - 27540 MOBILE Land Mobile Service
8815 - 9040 AIR Aeronautical Mobile Transoceanic Flights	27540 - 28000 GOVERN Government
9040 - 9500 FIXED Fixed Service	28000 - 29700 HAM Amateur 10 Meters 28000 - 28300 CW Amateur 10 Meter Extra, Advanced, Genral
9500 - 9900 SWBC Shortwave Broadcast 31 Meters	28100 - 28200 CW Amateur 10 Meter Extra, Advanced, Genral 28100 - 28200 CW Amateur 10 Meter Novice, Technician
9775 - 9995 FIXED Fixed Service	28300 - 28500 PHONE Amateur 10 Meter Novice, Technician
10000 - 10000 TIME Time Standard WWV	28300 - 29700 PHONE Amateur 10 Meter Extra, Advanced, General
10005 - 10100 AIR Aeronautical Mobile Transoceanic Flights	29700 - 29800 INDUST Forestry Service
10100 - 10150 HAM Amateur 30 Meters CW Only	29800 - 29890 FIXED Fixed Servic
10100 - 10150 CW Amateur 30 Meters Extra, Advanced, General	29890 - 29910 GOVERN Government Hal, N6AN
10100 - 11175 FIXED Fixed Service	29910 - 30000 FIXED Fixed Service

do not write above this line

## Field Day



1. Field Day Call Used W60TX 2. Club	or gro	oup name	Palo Alto	Ama	teur	RadioAss	N.
3. Field Day location End of Bay Roa,	2 - E	East	Palo Alte	0, C	A		
4. Check if you began set-up prior to 1800 UTC Saturday.	ple part	ici- n. <u>41</u>	6. Num		ransmitte s operatio	rs in on. 2	
7. ARRL/Canadian Section SCV 11.		C¹	W	1	PHO	NE	
8. Entry Class (check one only):		QSOs	Power Output		QSOs	Power Output	
X A. Club or non-club group portable	160	4003	1 ower output	160	2003	r ower output	
B. Non-club portable lop 2op	80	110	90	80	147	90	
list operators	40	108	90	40	100	90	
C. Mobile D. Home station (commercial power)	20	393	90	20	499	90	
E. Home station (confinercial power)	15	45	90	15	5	90	
	10		70	10		90	
9. Power source	6			6			
X Generator Battery	2			2	5	5	Na
Commercial mains Other	Other			Other	4	40	58
10. Call sign of Novice/Technician station KC65DE	Other			Other	38	40	VE
(class 2A and above)					20	10	) * [
12. Total CW QSOs $682 \times 2 = 1364$		656	CW QSOs		798	PHONE QSOs	
Total phone		11	Novice		64	Novice	
$QSOs = 862 \times 1 = 862$		26	CW QSOs Total	-	01	PHONE QSOs Total	1
Total QSO points 2226		682	CW QSOs		862	PHONE QSOs	
13. Total QSO points 2226 × Power Multiplier (5 W equals Claimed Score (less bonus points) 445		×5; 1 <u>50</u> \	W or less, $\times 2$ ; o	ver 150	) W, ×1)	2	
14. Bonus points							
Attach proof required for all bonus points claimed. All bonus points will be added at ARRL HQ.  **Notice position and the proof of the	lace	W1AW	ge to SM V Field Day mes ges handled (no. te		_ X	Natural Power Packet Radio VHF/UHF Other	
15. This certifies that the station whose call appears above with that, to the best of my knowledge, the points and scores s was operated in accordance with FCC rules and regulat Committee.  Date 13 July 95 Signed	set forth ions. I a	in the ab igree to b	pove summary a se bound by any	re corre decisio	ect and tra n of the A	ne. This station ARRL Awards	
16. Full mailing address (please print): Name of the N			Tucke				
Ad	dress _	1117	L Ram	020	54.		
MSD 140 (3/93)		Palo	Alto,	C	A	94301	

## Hamming it up—with a serious goal

Amateur radio operators have a field day and prepare for emergencies

by Janice Kim

ugar, sugar. This is whiskey . . . 2 Alpha, Santa Clara Valley," the amateur radio operator announced into his handie-talkie.

Dialogue like that could be heard for 24 hours running at the Amateur Radio Field Day Contest one day late last month. Radio operators or "hams" in the Palo Alto area were among those all over North America taking part in the event on June 24. The goal: to make the greatest number of communication contacts in the pation.

Organized by the American Radio Relay League, the local site for the contest was the Palo Alto Boat Works in East Palo Alto. Participants set up transmission stations near the water, a propitious open area to maximize the strength of the radio signals. A couple of tents, a trailer and several transmitter towers covered the dirt ground.

The local Boy Scouts, working on their radio merit badges, operated a novice station tent with a few frequencies. Palo Alto Amateur Radio Association members licensed by the Federal Communications Commission managed the satellite and Morse code stations.

As part of the event, radio operators send out a call on the shortwave band either through a "handie-talkie" transmitter by voice or by Morse code, and then wait for a response.

"It's kind of like fishing," explained Vic Black, secretary of the Palo Alto club. "You don't know what you're going to get."

Upon receiving a contact, they exchange the number of transmitters operating at one time and the name of their district. Another method of operation involves satellite stations, which relay the signal to other radio satellites circling the Earth.

Although the object of the national event is to perform higher than other divisions and provide an enjoyable social setting, amateur radio also serves a serious and significant purpose.

"We're exercising our ability to react in an emergency situation," said Black. "In the event of an earthquake, California's (standard electricity) lines are shut down, and police cars in Los Angeles cannot communicate with police here because they operate on a different frequency. Ham radio makes that possible." The amateur radio emergency service groups most recently assisted local authorities in providing communications during the Oklahoma bombing, when communication circuits were overloaded.

Aside from emergency aid, amateur radio improves international goodwill by providing a common means of communication and a shared interest. There are about 450,000 licensed hams in the United States, with many more around the world, particularly in Japan. The activity also encourages experimentation with electronics.

And it's not only for men. "It's a fairly male-dominated hobby," said Lily Anne Hillis, first female president of the club, "I hope to have paved the way for more females by showing females they actually can do this."

Hillis took up ham radio 10 years ago with an interest in disaster preparedness and emergency situations.

Some hams participate as a challenge to determine how many countries or how great a distance they can achieve. Others simply consider it a hobby. "It's what we call 'rag chew," said Black. "Some use it as a party line."

At the close of the 24-hour period, the Santa Clara Valley division had completed about 1,000 contacts by voice, 1,000 by Morse code, a couple hundred through the Boy Scout novices and four by satellite. Contacts were reached in Guatemala, Italy and Germany, in addition to those in the United States and Canada.

The Palo Alto club's ranking in the nation will not be determined until this fall after results have been compiled.

The Stanford University Amateur Radio Club also participated in the competition, with equipment set up in the hills behind the campus. The club contacted about 1,200 other stations, with more than half completed through Morse Code. Some were made through voice and digital communications, and a few through a solar-charged battery to power the radios.

The Palo Alto club holds regular meetings the first Friday of each month at 7:30 p.m. at the Menlo Park Recreation Center, 700 Alma St. Those interested in learning more about amateur radio are invited to attend.



Fred Canham of Los Altos, a past president of the Palo Alto Amateur Radio Association. is 30 feet up in the air as he puts up a radio tower for the club's annual field day last year.

Palo Alto Weekly • Wednesday, July 12, 1995



from the March '95 Mountain ARC (Teller County, Colo.) "MARC Communicator"— George Hinds, NRCIX, Editor

## The American Radio Relay League, Inc.



HEADQUARTERS, NEWINGTON, CONNECTICUT, U.S. A.

### Charter of Affiliation AFFILIATED 50 YEARS

Thereas it is the desire of the American Radio Relay League to establish bonds of affiliation with non-commercial amateur radio organizations of kindred aims and purposes to make possible unity of action in matters affecting the welfare of Amateur Radio and lend mutual strength; and Whereas

## Palo Alto Amateur Radio Association

has declared its sympathy with and allegiance to the aims and policies of the League in its efforts to strengthen and advance Amateur Radio Communication and Experimentation, and has expressed its willingness and desire to cooperate therein:

now Therefore, under the policies of its Board of Directors, the American Radio Relay League as of this date hereby declares the said organization to be an affiliated body, and issues this charter in token thereof.



## PAARA HISTORY

We are attempting to recover PAARA history. The above is an example of early PAARA. Gerry Tucker, WA6LNV was club president in 1987 and has the original certificate.

Gerry Wagstaffe, W6NIR, has loaned me some copies of PAARAgraphs back to 1973. Do You have older copies I could have or borrow?

Does anyone have documents to show when the club was founded, maybe before ARRL affiliation?

Wally K6URO

## PAARA AUCTIO October 7 **Ampex Cafeteria**

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Take Mathilda exit

Mathilda Left turn on to Mathida Ave North

☐ Blg 561 Sib Ave Big 560 Onizuka Air Base

Mathilda Ave North For more information contact: Lee Hemstreet (415) 493-5892 or Chuck Olson (408) 296-6944



#### **GET SOME SMARTS**

If you were ever searching for a way to get started building equipment utilizing embedded controllers (those little computers with small brains used in everything from clocks to cars), then perhaps Motorola Semiconductor has a complete solution of interest to you. Motorola has packaged in one kit a truly complete microcontroller development system. The kit includes: a complete set of manuals for the beginner and extending to the expert, all the software necessary for a development system, i.e. assembler, simulator, etc., a hardware in-circuit emulator that also performs as the microcontroller programmer. The system connects to the parallel port of a generic 286 or better PC, permitting you to emulate the operation of the microcontroller under PC control during development, bread boarding, and debugging, Finally, the kit contains an EPROM re-programmable 8-bit microcontoller chip for use in the final system.

Purchased separately, the cost of the individual system components could easily exceed \$700. Motorola offers the whole set-up in one box for \$100. The system is available from any the Motorola distributor like Hamilton, Wyle, Future, etc. I bought mine from Wyle by telephone, charging it to my credit card and having it shipped to my home. What could be easier. The kit is called the "68HC705J1A Development Kit". Wyle's phone number is 408-725-2500.

So, if you have been considering adding some "smarts" to your next project, this is possibly the best opportunity I've seen to get started. Maybe a group of three or four from the club that would like to tackle a beginning project together. I'd be happy to help.

### Dick Kors, KM6EP

kors@netcom.com

### e-mail?

Interest has been expressed in adding e-mail addresses to the PAARA data bank, to be printed with the next club roster. You may send your e-mail address to me and I'll pass them on to Bill, KA6LZI.

Wally, K6URO, wmporter@aol.com

### Palo Alto Amateur Radio Association, Inc. PO Box 911

Menlo Park, CA 94026

PresidentVP		****************		Be Filled Be Filled
Secretary	Vic Black, Jr.,	AB6SO	(415) 3	366-0636
Treasurer	Dave Bailey,	WS6W	(408)	730-5215
Program Director	Vic Black, Jr.,	AB6SO	(415) 3	66-0636
Trustee/Property/B	adgesFred Canh	am,K6YT .	(415) 9	48-8238
ARES Officer	Lily Anne Hill	is, N6PGM	(415) 3	325-5484
Club Historian	Steve Stuntz,	K6FS	(415)	322-4952
Raffle Chairperson.	Sy Stein,	WA6ROM	L. (415) 9	67-0362

#### **Board of Directors**

Lily Anne Hillis,	N6PGM	(415) 325 5484
Koert Koelman,	KC6WCI	(415) 593 5613
Kit Kohlmoos,	W6ISO	(415) 366 7813
Dave Meacham.,	W6EMD	(415) 369 2633
Chris Rempel,	N6VZD	(415) 375 1958
Bill Smith,	KE6CHQ	(415) 366 9173
Sy Stein,	WA6ROM	(415) 967 0362
Rich Stiebel,	W6APZ	(415) 494 0128
Bill Zaner.	WB6TYS	(415) 856 2089

#### PAARAgraphs Staff

ı	Editor
	DatabaseBill McElhinney,KA6LZL (415) 325-9808
ı	e-mail Address: wmnorter@aol.com

Submit material for PAARAgraphs by the 15th

### **PAARA Membership:**

### **Dues paid.....139**

Dues unpaid to date......69

If you are not receiving PAARAgraphs check with Dave Batley, WS6W, PAARA Treasurer. He will accept dues and notify Bill McElhinney, KA6LZI, to place you in the data base for mailing.

## PAARA AUCTION

## October 7

**Ampex Cafeteria** 

⇒San Mateo OES (under **Rick Reed, N6SHY**) is now on the WWW:

http://www.co.sanmateo.ca.us/oeshome.htm

Kenneth S. Dueker, KB6BPM/1

kdueker@hulaw1.harvard.edu

<sup>1</sup>PAARA·Palo Alto Amateur Radio Association·P.O. Box 911, Menlo Park, California 94026-0911

Club meetings are on the first Friday of each month, 7:30pm at the Menlo Park Recreation Center, 700 Alma Street, Menlo Park, CA.
Radio NET every Monday evening, at 8:30pm, on the 145.230-600 repeater Mhz, PL tone off-Membership in PAARA is \$6.00 per calendar year which includes a subscription to PAARAgraphs Make payment to the Palo Alto Amateur Radio Association.

Permission is hereby granted to reprint from this publication with appropriate source credit.



### **SEPTEMBER**

Palo Alto Amateur Radio Association, Inc. PAARAgraphs Newsletter P.O. Box 911 Menlo Park, California 94026



FIRST CLASS MAIL

Andy Korsak VE3FZK
504 Lakemead Way
Redwood City CA 94062-3919